ER Site No. 23: Disposal Trenches (Near Tijeras Arroyo and Golf Course)

ADS: 1309
Operable Unit: Tijeras Arroyo

Primary Contact: Dick Fate
Office Phone: 284-2568

Site History

ER Site 23 was mistakenly identified as a training area where radioactive material was buried. The site covers 16.1 acres of federally owned land controlled by Kirtland Air Force Base (KAFB). The site is located directly northwest of the Tijeras Arroyo Golf Course between Powerline Road and Pennsylvania Avenue. The terrain is nearly flat with an average ground elevation of about 5,340 feet above mean sea level. Soil at the site has been identified as the Gila fine sandy loam, which is underlain by the upper unit of the Santa Fe Group. The nearest monitor well, KAFB-0610, is located about 800 ft east of the site. The depth to the shallow water-bearing zone at ER Site 23 is projected to be about 290 feet bgs. The regional aquifer is projected to be approximately 500 feet bgs. The nearest water-supply well, KAFB-11, is located about 1.4 miles northeast of the site.

The initial round of environmental studies conducted during the mid-1980s Comprehensive Environmental Assessment and Response Program (CEARP) attributed the disposal of a radioactive thorium-232 source in a trench at ER Site 23. However, no Department of Energy (DOE), Sandia National Laboratories (SNL/NM), or KAFB documents indicate that SNL/NM has ever conducted research or disposal activities at ER Site 23. The reason that ER Site 23 has been investigated was that a SNL/NM employee, who was interviewed during the CEARP investigation in 1985, had "... heard that men in white anti-C suits and heavy equipment were digging in the staked area of the arroyo near the golf course in the late 1950s or early 1960s." Yellow metal posts at ER Site 23 were assumed to mark three disposal trenches where thorium-232 sources were buried. Subsequent (late-1990s) phone conversations with this employee have cast doubts on his recollection. Because no documents support the employee's recollection, the most plausible conclusion is that the employee had inadvertently attributed some Defense Nuclear Agency (DNA) training at the nearby RW-10 sites to ER Site 23. The RW-10 training area known as TS-4 is located over a slight ridge and a mere 1,050 ft north of ER Site 23.

According to the KAFB Installation Restoration Program (IRP) Chief, the DNA has used the RW-10 sites since the 1960s for training emergency-response teams that respond to transportation accidents involving nuclear weapons. Thorium-232 sources are used at the RW-10 sites. Eight RW-10 sites are currently being investigated as part of the KAFB IRP, which is managed by the DoD. The locations of the RW-10 sites have been documented since at least 1976; however, none of the RW-10 sites coincide with ER Site 23.

The SNL/NM ER Project conducted both radiological and Unexploded Ordinance / High Explosives (UXO/HE) surveys at ER Site 23 in November 1993. No radioactive anomalies or UXO/HE material were identified. In June 1994, geophysical surveys were conducted and three test pits excavated in the vicinity of the yellow metal posts. Instead of marking the suspected thorium-232 sources, the yellow metal posts were found to mark a water line and a telephone cable. These utilities are depicted on vintage KAFB maps.

The KAFB IRP also has conducted field investigations in an attempt to resolve the issue of buried thorium-232 sources near ER Site 23. In August and September 1996, the IRP surveyed and sampled a study area known as the South Tijeras Trench (RW-75). The study area covered 5.1-acres located immediately north of ER Site 23 and south of the TS-4 training area. Both radiological and geophysical surveys were conducted. No radioactive anomalies were detected. Several geophysical anomalies were identified and subsequently investigated using a series of 12 test pits. No buried debris was found during the excavation work. The geophysical anomalies reflected natural geologic variations in native soil. Ten soil samples were collected from the test pits and analyzed for RCRA metals and gamma-emitting radionuclides. No contamination was detected in the soil samples. The IRP concluded that no buried sources or contamination were present at RW-75. In late 1996, the IRP conducted a STOLSTM magnetometer survey across ER Site 23 and RW-75. Only buried water lines and phone cables were detected; no suspicious items were identified by the magnetometer.

Constituents of Concern

No COCs are relevant to ER Site 23 because no SNL/NM research or disposal activities have occurred there.

Current Hazards

No chemical or radioactive hazards are present at ER Site 23.

Current Status of Work

SNL/NM submitted a No Further Action (NFA) Proposal for ER Site 23 in June 1995. SNL/NM also submitted a response to New Mexico Environmental Department (NMED) Notice of Deficiency (NOD) comments in October 1996. ER Site 23 was accepted for NFA in October 1999. The NFA was approved by NMED on September 15, 2000 after completing the public review and permit modification process.

Future Work Planned

No future work is planned for ER Site 23.

Waste Volume Estimated/Generated

No waste was disposed of or generated at ER Site 23.

Information for ER Site 23 was last updated Jun 27, 2001.